DuPont Haskell Laboratory
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DUPONT

DuPont Haskell Laboratory

May 29, 1998 8EHQ-0698-898

VIA FEDERAL EXPRESS

Document Processing Center (7407)
Attention: 8(e) Coordinator
Office of Pollution Prevention and Toxics
U. S. Environmental Protection Agency
401 M Street SW
Washington, D.C. 20460-0001

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Dear 8(e) Coordinator:

8EHQ-0390-0898
P-90-1840

This letter is to inform you of preliminary findings from a 13-week feeding study in albino rats being conducted under a Section 5(e) Consent Order (DCN: 50-921000073) on the subject chemical.

Groups of 10 male and 20 female Crl:CD® BR albino rats were fed diets containing 0, 100, 500, 1000, or 1500 ppm of the subject chemical for approximately 13 weeks. Ten rats per sex from each group were then euthanitized. Given their greater sensitivity based on previous studies, only female rats were used for the recovery groups. Clinical pathology was performed on male and female rats after approximately 7 and 13 weeks of exposure and on female rats after approximately 4 weeks of recovery. Histopathology was conducted on all animals sacrificed after approximately 13 weeks of exposure and 13 weeks of recovery.

Following 13 weeks of treatment, slight decreases in red blood cell parameters (RBC count, hematocrit, and/or hemoglobin) were seen in females at 500 ppm or greater and in males at 1500 ppm. Histopathologic changes secondary to anemia were found in the liver (extramedullary hematopoiesis), bone marrow (hyperplasia) and spleen (congestion). These hematologic changes were not seen after a 1 month recovery (females only). Additionally, hepatic hypertrophy and eosinophilic foci were found in male and female rats at 1000 ppm and/or 1500 ppm. One of 10 male rats at 1500 ppm had a thyroid gland follicular cell carcinoma. The follicular cell carcinoma was seen only at the highest dose level, was not accompanied by similar changes in any female even after a 13-week recovery period, and was not accompanied by other proliferative changes such as hyperplasia or adenoma. In the eyes, retinopathy (characterized by retinal pigment epithelium hypertrophy, degeneration/necrosis of retinal photoreceptor inner/outer segments, and atrophy of the inner retina and choriocapillaris) was seen in females at 500 ppm or greater and at 1000 ppm or greater in males. In the mesenteric lymph nodes, macrophage aggregates were seen in males and females at 500 ppm or greater.

Following 13 weeks of recovery, minimal hepatocellular eosinophilic foci were seen in 0/10, 1/10, 2/10, 5/10 and 7/9 females at 0, 100, 500, 1000 and 1500 ppm, respectively. In addition, increased mitotic figures were detected in the liver of 1500 ppm females. Retinal injury, of comparatively greater severity than that noted after 90 days of exposure, was seen in females at 1000 and 1500 ppm. In the mesenteric lymph nodes, macrophage aggregates were seen at all dose levels; this is a common lesion in older rats and was not associated with cytotoxic changes in the lymph nodes.

The effects described above are being reported in accordance with the guidance given in the EPA TSCA Section 8(e) Reporting Guide (June, 1991).

Sincerely,

A. Michael Kaplan

A. Michael Kaplan, Ph.D.
Manager-Regulatory Affairs

AMK/RV:ras
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